



The APD 1 / 2-way connectors are derived from ISO 15170 and adapted to applications requiring high power. These versions cover wire ranges from 16 mm<sup>2</sup> up to 50 mm<sup>2</sup> power and a power consumption up to 245A. The combination of small size and high power make them an ideal solution for many applications.

*Applications for the 1 / 2-way connector include:*

- Tail lifts
- On Board Kitchen
- Power Supply for Antennas and Base Stations

*Power Distribution in:*

- Trucks
- Tractors

### Electrical Data

<b>Operating Voltage</b>	48 VDC*
<b>Operating Current</b>	see derating curve
<b>Contact Resistance</b>	0,4 m $\Omega$ max.
<b>Voltage Proof</b>	1000 VAC, 60 seconds
<b>Insulation Resistance</b>	10 M $\Omega$ min.

### Mechanical Data

<b>Durability</b>	50 Mating Cycles
<b>Coupling Torque</b>	2 Nm max.
<b>Static Load, free connector</b>	350 N (ISO 15170-2, Sec. 4.6)

### Environmental Data (acc. ISO 15170)

<b>Temperature Range</b>	-40 °C up to 125 °C (ISO 15170-2, Sec. 6.4)
<b>Humidity Range</b>	up to 95 % r.h. (ISO 15170-2, Sec. 6.4)
<b>Sealing</b>	IP 67 (DIN EN 60529)*
<b>Salt Spray</b>	96 h, 35 °C (ISO 15170-2, Sec. 6.2)
<b>Industrial Climate</b>	SO <sub>2</sub> , 0,67 % (ISO 15170-2, Sec. 6.3)
<b>Fluid Compatibility</b>	Brakefluid, ATF, fuel, .. (ISO 15170-2, Sec. 6.6)*
<b>Vibration Resistance</b>	Sine, 100 m/s <sup>2</sup> , 3 axis, 24h, RT (EN 60512)*

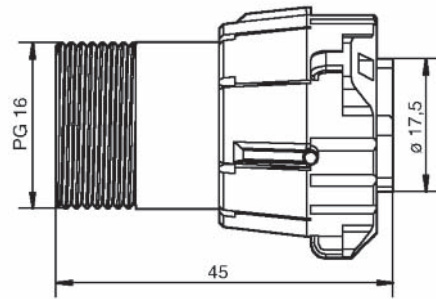
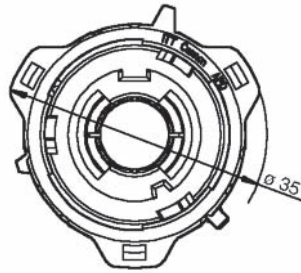
### Materials List

<b>Housing Parts</b>	PBT GF
<b>Sealing Parts</b>	HNBR (alternative FKM)
<b>Coupling Nut</b>	PA 66 GF
<b>Contacts</b>	Copper Alloy, Ag plated

\* Further information available upon request

Dimensions shown in mm  
Specifications and dimensions subject to change

High Power Plug, 1-way



Order No.	Designation	Code	Color
121583-0012	APD-5BSH	5	blue (RAL 5012)
121583-0013	APD-6BSH	6	red (RAL 2002)
121583-0042	APD-7BSH	7	black (RAL 9005)

Packaging unit 100 pcs.

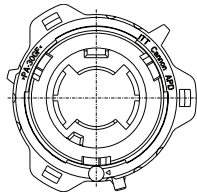
Socket crimp contacts see pages 12 and 13.

Accessories, see pages 15 and 16.

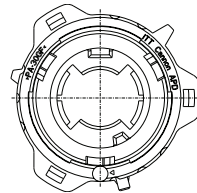
Note: Always use hex nut and cable seal.

Coding, 1-way layouts

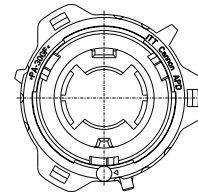
View on Mating Face



Code 5  
blue



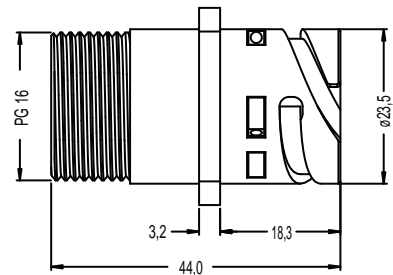
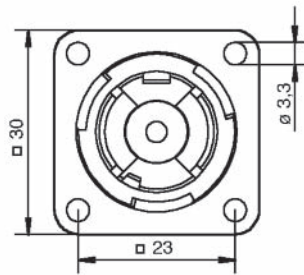
Code 6  
red



Code 7  
black

Note: the connectors offer both mechanical keying and visual coding by different colors.

High Power Flange Receptacle, 1-way



Order No.	Designation	Code	Color
121583-0014	APD-5APH	5	blue (RAL 5012)
121583-0015	APD-6APH	6	red (RAL 2002)
121583-0043	APD-7APH	7	black (RAL 9005)

Packaging unit 100 pcs.

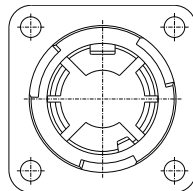
Pin crimp contacts see pages 12, 13 and 14.

Accessories, see pages 15 and 16.

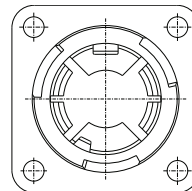
Note: Always use hex nut and cable seal.

Coding, 1-way layouts

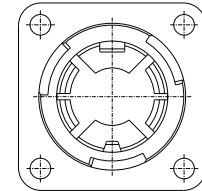
View on Mating Face



Code 5  
blue



Code 6  
red

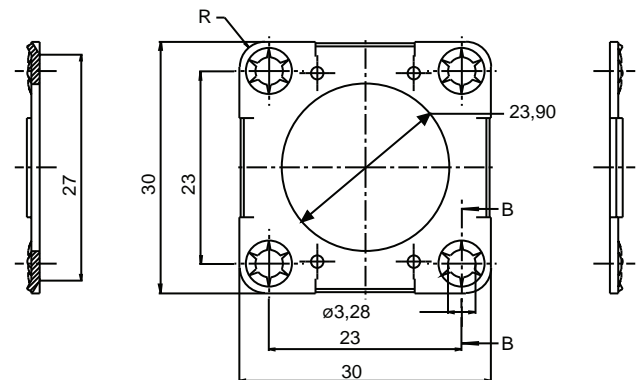
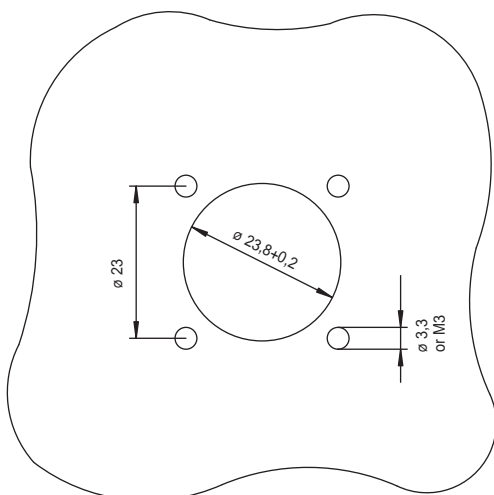


Code 7  
black

Note: the connectors offer both mechanical keying and visual coding by different colors.

Panel Cut Out

Flange for all Flange Receptacles

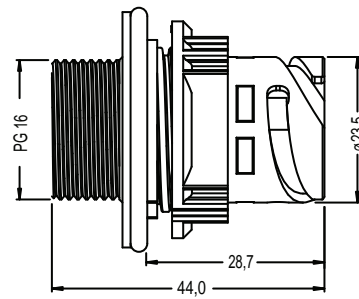
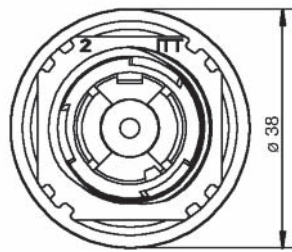


Order Number: 066-8516-005

Metal mounting flange for wall mounting of flange receptacles.

Dimensions shown in mm  
Specifications and dimensions subject to change

High Power Jam Nut Receptacle, 1-way



Order No.	Designation	Code	Color
121583-0016	APD-5CPH	5	blue (RAL 5012)
121583-0017	APD-6CPH	6	red (RAL 2002)
121583-0217	APD-7CPH	7	black (RAL 9005)

Packaging unit 100 pcs.

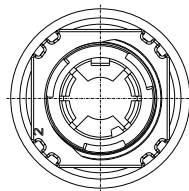
Pin crimp contacts see pages 12, 13 and 14.

Accessories, see pages 15 and 16.

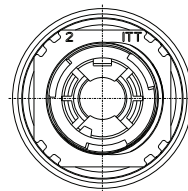
Note: Includes jam nut for wall thickness 1...4 mm. Always use hex nut and cable seal.

Coding, 1-way layouts

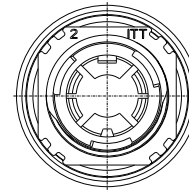
View on Mating Face



Code 5  
blue



Code 6  
red

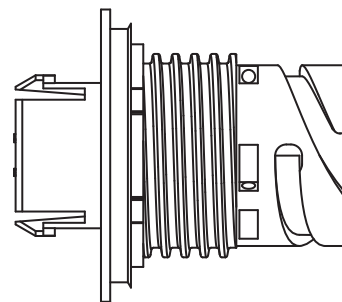
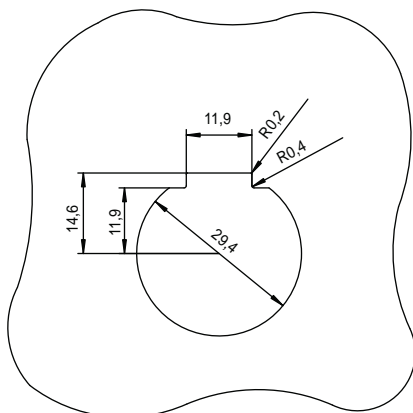


Code 7  
black

Note: the connectors offer both mechanical keying and visual coding by different colors.

Panel Cut Out

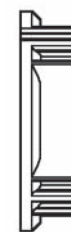
Flange for all Flange Receptacles



Housing



O-ring



Jam Nut

Wall thickness: Standard Jam Nut: min. 1,0 / max. 4,0 mm Special Jam Nut: min. 2,0 / max. 5,0 mm

Jam Nut, special

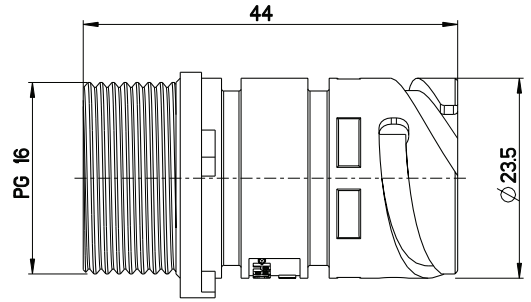
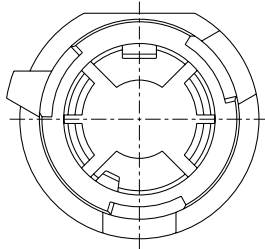
Designation	Order No.
for special wall thickness 2,0 - 5,0 mm	217-8516-001



Dimensions shown in mm  
Specifications and dimensions subject to change

www.ittcannon.com

High Power Snap-In Receptacle, 1-way



Order No.	Designation	Code	Color
249-8619-005	APD-7SPH	7	black (RAL 9005)
249-8619-006	APD-6SPH	6	red (RAL 2002)
consult factory	APD-5SPH	5	blue (RAL 5012)

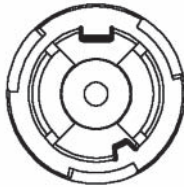
Packaging unit 100 pcs.

Pin crimp contacts see pages 12, 13 and 14.  
 Accessories, see pages 15 and 16.

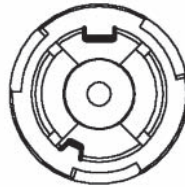
Note: Always use hex nut and cable seal.

Coding, 1-way layouts

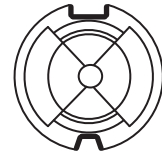
View on Mating Face



Code 5  
blue



Code 6  
red



Code 7  
black

Note: the connectors offer both mechanical keying and visual coding by different colors.

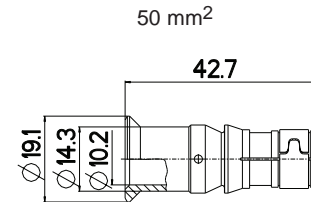
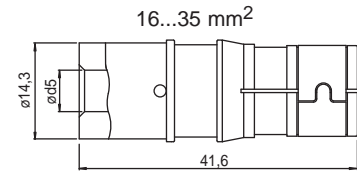
Panel Cut Out

3D data for design of snap-in cut out available on request. Please consult factory.

Machined Socket Crimp-Contacts, High Performance Copper, Silver plated

Order No.	AWG	Contact size	d5+0,15
031-8521-030 (16,00 mm <sup>2</sup> )		0	6,2
031-8521-010 (25,00 mm <sup>2</sup> )	4	0	7,6
031-8521-020 (35,00 mm <sup>2</sup> )	2	0	9,1
031-8646-015 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

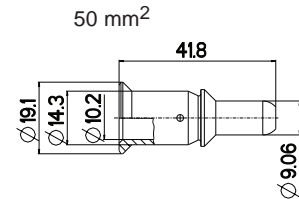
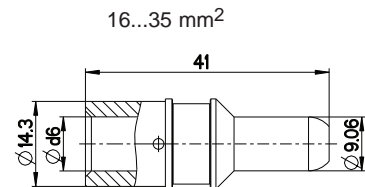
Packaging unit 100 pcs.



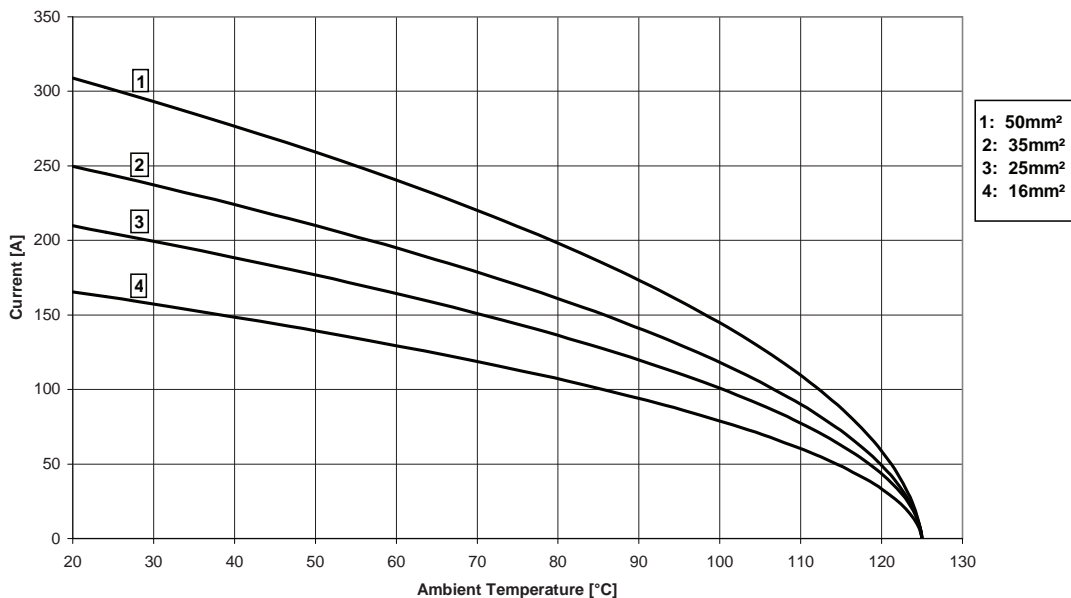
Machined Pin Crimp Contacts, High Performance Copper, Silver plated

Order No.	AWG	contact size	d6+0,15
030-8614-030 (16,00 mm <sup>2</sup> )		0	6,2
030-8614-010 (25,00 mm <sup>2</sup> )	4	0	7,6
030-8614-020 (35,00 mm <sup>2</sup> )	2	0	9,1
030-8581-029 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.



Derating Curve, High Performance Copper Contact

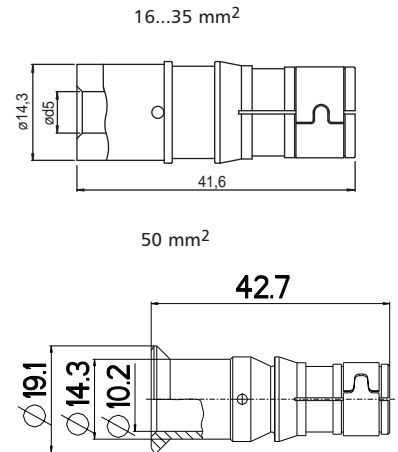


**Machined Socket Crimp-Contacts, Standard Brass, Silver plated**

Order No.	AWG	Contact size	d5+0,15
031-8531-010 (16,00 mm <sup>2</sup> )		0	6,2
031-8531-011 (25,00 mm <sup>2</sup> )	4	0	7,6
031-8531-012 (35,00 mm <sup>2</sup> )	2	0	9,1
031-8531-013 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.

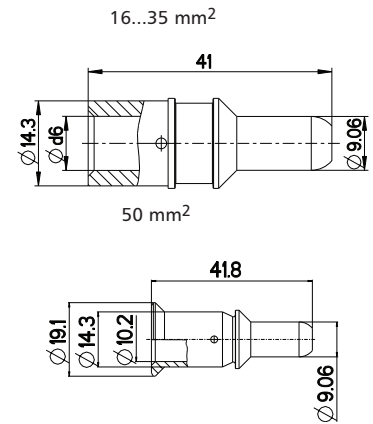
\*Available by Request



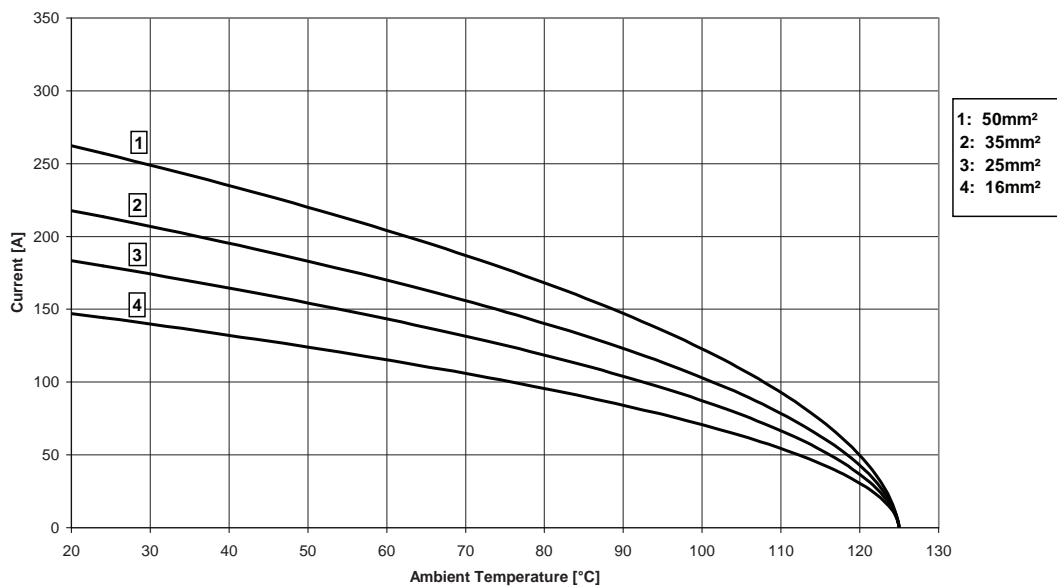
**Machined Pin Crimp Contacts, Standard Brass, Silver plated**

Order No.	AWG	contact size	d6+0,15
030-8581-030 (16,00 mm <sup>2</sup> )		0	6,2
030-8581-031 (25,00 mm <sup>2</sup> )	4	0	7,6
030-8581-032 (35,00 mm <sup>2</sup> )	2	0	9,1
030-8581-033 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.



**Derating Curve, Standard Brass Contact**



Dimensions shown in mm  
 Specifications and dimensions subject to change



A new finger protected pin contact has been implemented for the APD High Power 1-way connector series.

Applications for the 1-way connector include:

- Tail lifts
- On Board Navigation
- Power Supply for Antennas and Base Stations

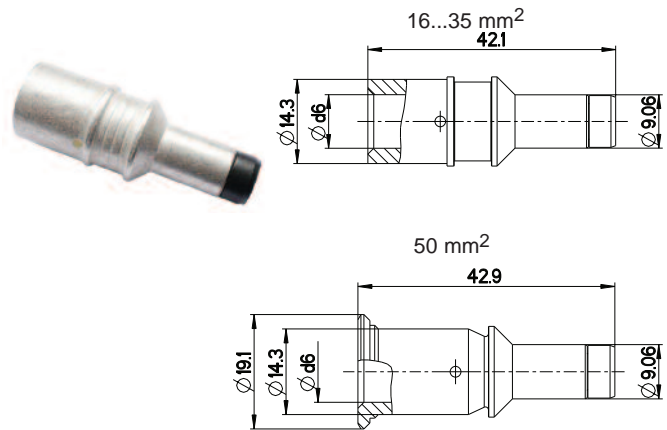
Power Distribution in:

- Trucks
- Tractors
- Hybrid and Electric Vehicles

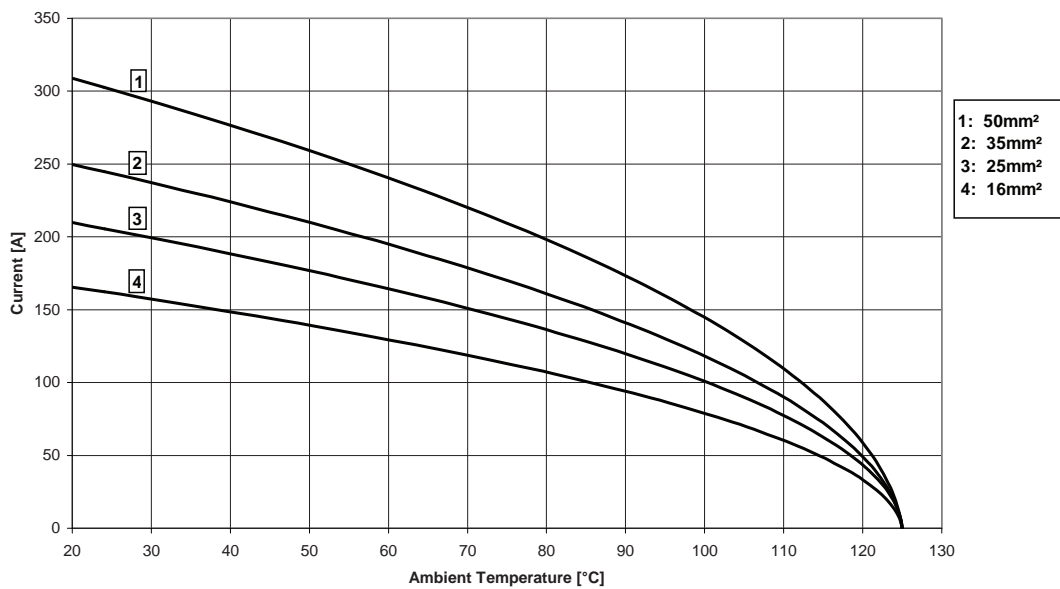
**Machined Pin Crimp Contacts, High Performance Copper, Silver plated, Finger Protected**

Order No.	AWG	Contact size	d5+0,15
120110-0229 (16,00 mm <sup>2</sup> )		0	6,2
120110-0220 (25,00 mm <sup>2</sup> )	4	0	7,6
120110-0221 (35,00 mm <sup>2</sup> )	2	0	9,1
120110-0222 (50,00 mm <sup>2</sup> )	with bunch	0	10,2

Packaging unit 100 pcs.



**Derating Curve, High Performance Copper Contact, Finger Protected**





**Sealing Cap for Receptacle**

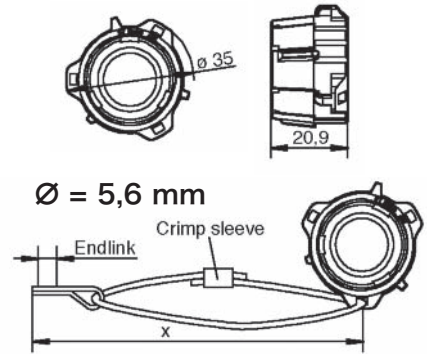
Designation	Order No.
APD-DP	121583-0021

Packaging unit 100 pcs.

APD-DP with rope, end link and eyelet  
 X = Total rope length upon request

Order number 120110-0026\* X~9cm

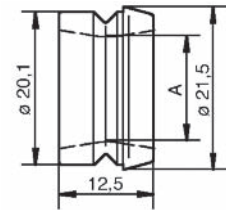
\* for other lengths please consult the factory



**Cable Seal for Cable (in acc. to DIN 670722 FLY/ DIN 72551 FLRY) High Power 1-way**

Order No.	Insulation $\varnothing$	$\varnothing$ A mm
351-8697-005	5,8 - 7,4	5,4
351-8697-014	7,4 - 8,4	6,5
351-8697-009	8,4 - 10,0	8,0
351-8697-001	10,4 - 12,0	10,0
351-8697-002	12,3 - 13,5	11,6
351-8697-003	14,2 - 15,8	13,8

Packaging unit 100 pcs.

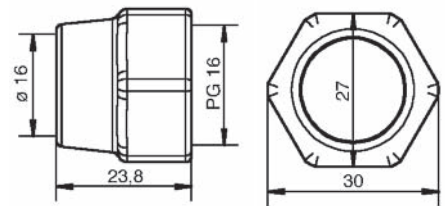


**Hexagonal Nut**

**High Power 1-way**

Order No. 217-8516-010

Packaging unit 100 pcs.

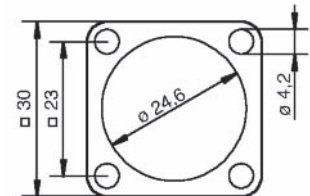


**Flange Gasket**

**For Flange Receptacle, High Power 1-way**

Order No. \_\_\_\_\_  
 075-8503-000 (-55/125°C)  
 075-8503-004 (-30/200°C)

Packaging unit 100 pcs.  
 Nominal Width: 17



**Adaptor for Flex Tube**

**For 1-way Plug and Receptacle**

Order No. 980-8672-010 ( $\varnothing$  17 mm)

Packaging unit 100 pcs.



**90° Endbell**

**For 1-way Plug and Receptacle up to 25 mm<sup>2</sup> wire**

Order No.: 980-8672-004

Packaging unit 100 pcs.



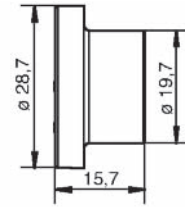
$\varnothing$  max. = 17,4 mm  
 thread = PG 16

Dimensions shown in mm  
 Specifications and dimensions subject to change

### Dust Cap for Plug

Order No. 025-8636-005

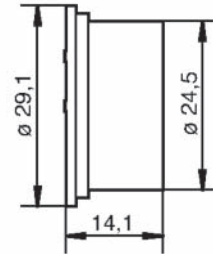
Packaging unit 100 pcs.



### Dust Cap for Receptacle

Order No. 025-0480-000

Packaging unit 100 pcs.



### Blind Socket for 1 / 2 / 4 / 6 / 7-way

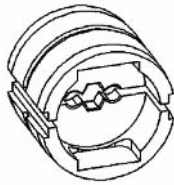
Order No. 120110-0217

Packaging unit 100 pcs.

Note: All cavities closed, mates with 1-7-way APD versions.



Tooling for 1-way High Power Connectors



Contact / Socket	Crimp-Dies
031-8561-000 (50,00 mm <sup>2</sup> )	121586-5229
031-8521-020 (35,00 mm <sup>2</sup> / AWG 2)	121586-5229
031-8521-010 (25,00 mm <sup>2</sup> / AWG 4)	121586-5229
031-8521-030 (16,00 mm <sup>2</sup> )	121586-5229

Contact / Pin	Crimp-Dies
030-8592-000 (50,00 mm <sup>2</sup> )	121586-5229
030-8614-020 (35,00 mm <sup>2</sup> / AWG 2)	121586-5229
030-8614-010 (25,00 mm <sup>2</sup> / AWG 4)	121586-5229
030-8614-030 (16,00 mm <sup>2</sup> )	121586-5229
Optional locator	121586-5232

Assembly Tools Jam Nut Receptacle

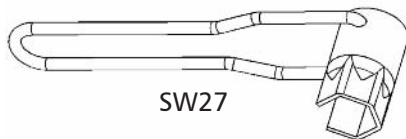
Square box spanner for torque moment wrench to fix the jam nut.



Designation	Order No.
SS627G	317-8649-034

Assembly Tools (Hexagonal Nut)

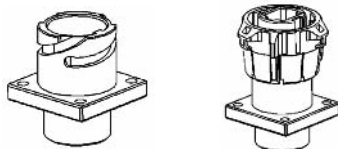
To fix the hexagonal fixing nut 217-8516-010.



Order No.	980-8672-005
-----------	--------------

Torque: 2.5 ± 0.5Nm

Assembly and Torque Wrench Adapter

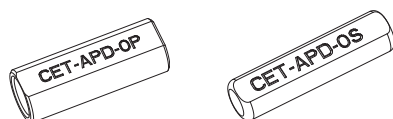


Designation	Order No.
MA-APD-1/ 2-P	248-8653-063
MA-APD-1/ 2-R	249-8619-010

1/4" adaption

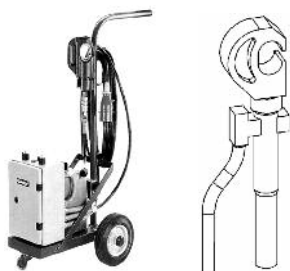
Contract Extraction Tool

Housing can not be reused.



Designation	Order No.
CET-APD-#OP	121586-5192
CET-APD-#OS	121586-5193

Crimp Tool



Crimp Tool	Designation	Order No.
Hydraulic, hand operated:	HPW400U-ITT	121586-5257
Electro-hydraulic, 230 V AC operated	HP400EL-ITT	121586-5253

For detailed assembly instruction please see CAS 25023.